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GREENHOUSE TOMATO BREEDING SUMMER CROP 1987
FIELD EVALUATION TRIALS, WOOSTER

W. A. Erb, N. J. Flickinger and J. Y. Elliott

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Greenhouse Tomato Breeding Summer Crop 1987
Field Evaluation Trials, Wooster

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Wooster

Greenhouse and fresh market field beefsteak type cultivars were evaluated in the field at OARDC/OSU Wooster to compare performance and to determine valuable characteristics. Seed for this trial was donated by The OARDC/OSU and 8 seed companies (Table 1a).

Materials and Methods

Basic information about the cultivars evaluated in this study is presented in Tables 2 and 3. Twelve greenhouse hybrids and 3 inbreds and 23 field hybrids and 3 inbreds were evaluated in a replicated trial in the field at The OARDC in the summer of 1987. The trial had 12 plants/entry divided into 3 replications. Seeds were sown into wooden flats on April 22. Seedlings were thinned to 72 plants/flat. Plants were hardened by withholding water 2 weeks before planting.

Plants were spaced in the field 12" within and 48" between rows. The planting was fertilized on June 16 with 523 lbs/acre of 10-20-20 and on July 10 and August 3 with 174 lbs/acre of 10-20-20 and Ca₂NO₃.

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TABLE 1a. Name and address of the seed companies that donated seed for this study.

Table Code	
1. AC	Abbott & Cobb, Inc., Box F307, Feasterville, PA 19047
2. BP	W. Atlee Burpee Co., Warminster, PA 18974
3. BR	Bruinsma Seeds b.v., PO Box 24, 2670 AA Naaldwijk, Holland
4. DR	DeRuiter Seeds, Inc., PO Box 20228, Columbus, OH 43220
5. JH	Joseph Harris Co., Moreton Farm, 3670 Buffalo Rd., Rochester, NY
6. PS	Petoseed Co., Inc., Saticoy, CA 93004-0206
7. ST	Stokes Seeds, Inc., Buffalo, NY 14240
8. TW	Twilley Seed Co., Inc., PO Box 65, Trevoze, PA 19047
9. OH	Ohio Agricultural Research & Development Center/Ohio State University

TABLE 1b. Weather data from the OARDC weather station, Wooster.

Month	Mean Temp. °F		% Relative Humidity		Precipitation (inches)	Evaporation (inches)
	Max	Min.	Max	Min		
June	81	57	88	53	0.16	0.25
July	85	63	86	58	0.10	0.23
August	81	56	85	55	0.12	0.20
September	74	52	85	56	0.07	0.15

TABLE 2. Reponse of the cultivars in this trial to some of the major tomato diseases.^z

Entry	Seed Source	Type ^y	TMV (TM2 ²)	Fusarium			Verticillium		Root Knot Nematode (M. incognita) (Mi)
				Crown & Root Rot (FCRR)	Race 1 (I-1)	Race 2 (I-2)	Race 1 (Ve)	Race 2 (Ve 2)	
Ohio CR6	OH	H	R	R	R	S	R	S	S
Ohio 1403	OH	H	R	R	R	R	R	S	R
Ohio 1499	OH	H	R	R	R	R	R	S	R
Better Boy	BP	H	S	S	R	S	R	S	R
Big Early	BP	H	S	S	S	S	S	S	S
Big Girl	BP	H	S	S	R	S	R	S	S
Early Pick	BP	H	S	S	S	S	S	S	S
Lady Luck	BP	H	R	S	R	S	R	S	S
Bux IT637 (VFT)	BP	H	R	S	R	S	R	S	S
Dombello	BR	H	R	S	S	R	R	S	R
Dombito	BR	H	R	S	R	R	S	S	S
Jumbo	BR	H	S	S	R	R	R	S	S
Caruso	DR	H	R	S	S	R	R	S	S
631-Pink Girl	TW	H	S	S	R	S	R	S	S
632-Fantastic	TW	H	S	S	S	S	S	S	S
652-Super Beefsteak	TW	I	S	S	S	S	S	S	S
Jet Star	JH	H	S	S	R	S	R	S	S
Moreton Hyb.	JH	H	S	S	S	S	R	S	S
Star Pak	JH	H	S	S	R	R	R	S	S
Beefmaster	JH	H	S	S	R	S	R	S	R
Supersonic	JH	H	S	S	R	S	R	S	S
Early Set	JH	H	R	S	R	R	R	S	R
Ohio MR13	OH	I	R	S	R	S	S	S	S
Vendor	ST	I	S	S	S	S	S	S	S
Tropic VF	ST	I	S	S	R	S	R	S	S
Ont. Pink 774	ST	H	R	S	S	S	S	S	S
Ont. Hyb. Red 7745	ST	H	R	S	S	S	S	S	S
Pole King	AC	H	S	S	R	R	R	S	S
Tuckcross 520	PT	H	S	S	R	S	S	S	R
Tuckcross 533	PT	H	S	S	R	S	S	S	R
Vineripe VFN	PT	H	S	S	R	S	R	S	R
Wonder Boy VFN	PT	H	S	S	R	S	R	S	R
Manalucie	PT	I	S	S	S	S	R	S	R
Ponderosa Pink	PT	I	S	S	S	S	S	S	S
Beefmaster	PT	H	S	S	R	S	R	S	R
Avalanche	PT	H	S	S	R	S	R	S	R
Heavyweight	PT	H	R	S	R	S	R	S	R
Monte Carlo	PT	H	S	S	R	S	R	S	R
Pink Girl	PT	H	S	S	S	S	S	S	S
PS M45573	PT	H	R	S	R	R	R	S	S

^z R = resistant and S = susceptible^y H = hybrid and I = inbred

TABLE 3. Genetic composition, plant type, maturity, and plant and fruit characteristics of the tomato cultivars in this trial.

Entry	Seed Source	Genetic ^z Comp.	Type ^y	Days To Maturity	Plant vigor	Fruit Shape	Fruit Color	Flavor ^x	Soluble Solids
Ohio CR6	OH	H	G	76	Average	Deep Obl	Pink	7.0	4.8
Ohio 1403	OH	H	G	70	Average	Deep Obl	Pink	7.2	4.8
Ohio 1499	OH	H	G	76	Average	Deep Obl	Pink	7.8	5.0
Better Boy	BP	H	F	72	Good	Deep Glo	Red	7.3	5.0
Big Early	BP	H	F	62	Average	Deep Obl	Red	6.3	4.1
Big Girl	BP	H	F	78	Good	Deep Obl	Red	6.5	4.6
Early Pick	BP	H	F	62	Good	Deep Obl	Red	7.3	4.8
Lady Luck	BP	H	F	78	Good	Deep Obl	Red	7.3	5.0
Bux IT637 (VFT)	BP	H	F	70	Good	Deep Obl	Red	6.6	4.7
Dombello	BR	H	G	62	Average	Deep Obl	Red	6.9	4.7
Dombito	BR	H	G	70	Average	Deep Obl	Red	6.7	4.6
Jumbo	BR	H	G	70	Average	Deep Obl	Red	6.3	4.8
Caruso	DR	H	G	76	Average	Deep Obl	Red	6.4	4.7
631-Pink Girl	TW	H	F	76	Good	Deep Obl	Pink	7.7	5.2
632-Fantastic	TW	H	F	65	Fair	Deep Obl	Red	6.9	4.7
652-Super Beefsteak	TW	I	F	78	Average	Oblate	Red	6.7	4.8
Jet Star	JH	H	F	62	Good	Deep Obl	Red	6.6	4.4
Moreton Hyb.	JH	H	F	62	Average	Deep Glo	Red	7.4	4.6
Star Pak	JH	H	F	62	Average	Globe	Red	6.8	4.9
Beefmaster	JH	H	F	72	Good	Oblate	Red	7.2	4.9
Supersonic	JH	H	F	72	Good	Deep Obl	Red	6.4	4.5
Early Set	JH	H	F	62	Fair	Globe	Red	6.6	4.8
Ohio MR13	OH	I	G	76	Fair	Deep Glo	Pink	6.9	4.9
Vendor	ST	I	G	70	Fair	Globe	Red	7.0	4.7
Tropic VF	ST	I	G	80	Good	Deep Obl	Red	5.9	4.6
Ont. Pink 774	ST	H	G	70	Average	Deep Obl	Pink	7.0	4.6
Ont. Hyb. Red 7745	ST	H	G	70	Average	Globe	Red	7.1	4.5
Pole King	AC	H	F	75	Average	Deep Glo	Red	6.6	4.9
Tuckcross 520	PT	H	G	74	Good	Deep Glo	Red	6.3	4.2
Tuckcross 533	PT	H	G	75	Average	Deep Glo	Red	6.8	4.4
Vineripe VFN	PT	H	F	80	Good	Globe	Red	7.0	4.6
Wonder Boy VFN	PT	H	F	80	Good	Deep Glo	Red	7.1	4.9
Manalucie	PT	I	F	80	Average	Deep Obl	Red	7.2	5.0
Ponderosa Pink	PT	I	F	80	Average	Oblate	Pink	6.3	5.1
Beefmaster	PT	H	F	80	Average	Oblate	Red	7.0	4.9
Avalanche	PT	H	F	72	Average	Oblate	Red	7.2	4.8
Heavyweight	PT	H	F	78	Good	Deep Obl	Red	6.9	4.9
Monte Carlo	PT	H	F	75	Average	Deep Glo	Red	7.6	4.9
Pink Girl	PT	H	F	76	V. Good	Deep Obl	Pink	7.0	4.4
PS M45573	PT	H	F	78	Good	Deep Obl	Red	5.8	5.0

^z H = hybrid and I = inbred

^y G = greenhouse and F = field

^x The scale for flavor ranged from 9 to 1 (9 = excellent and 1 = very poor).

Stakes were placed at 2 plant intervals and twine was wrapped between stakes throughout the season to support the plants. Plants were pruned to a central leader and topped at 4 feet. Irrigation was applied as needed. Weather data for the summer is presented in Table 1b.

Fruit harvesting and grading started on July 29 and continued every week for 11 weeks. Fruit was graded into 5 classes (No. 1 large, over 255g (9 oz), No. 1 medium, from 255g to 99g (3.5 oz), No. 1 small, under 99g, No. 2, and cull) every week and according to 8 fruit disorder categories (Puff, Cracks, Off Shape, Rough, Off Color, Blossom End Rot, Zippered, and Mixed) on weeks 5 through 9. No. 1 fruits consisted of well formed smooth tomatoes free from defects. No. 2 fruits were reasonably well formed tomatoes which were free from damage caused by physiological disorders, disease, insects, or other means. Fruits were placed in the mixed category if more than one disorder occurred. Fruits were also scored for shape, flavor, and soluble solids. One fruit/rep was evaluated on 3 different harvests for flavor and soluble solids.

Results

There were no significant differences between the cultivars in fruit flavor or soluble solids (Table 3). The cultivar 'Jet Star' had the best combination of early yield (1332g/plt.), fruit size (199g), and % marketable fruit (73.7%) (Table 4). The 2 best cultivars for % marketable fruit were 'PS M45573' (82.0%) and 'Early Set' (81.1%). However, the early yield of 'PS M45573' (851g/plt.) and the fruit size of 'Early Set' (133g) were low. The greenhouse cultivar with the best combination of early yield (1143g/plt.), fruit size (181g), and % marketable fruit (70.9%) was 'Dombello'. The amount of No. 1 large (0.33) and medium (1.00) fruit produced by 'Dombello' was

TABLE 4. Comparison of field-grown tomato cultivars for graded fruit classes, yield, fruit size, and percent No. 1 and No. 2 fruit for the first 5 weeks of the trial.²

Entry/Source	Type	# of No.1 Lg /Plt	# of No.1 MD /Plt	# of No.1 SM /Plt	# of No. 2 /Plt	# of Culls /Plt	Fruit wt/plt (g)	Fruit Size (g)	% No. 1 Fruit	% No.1 & No. 2 Fruit
Ohio CR6/OH	G		0.25		0.3	3.2	594	184	4.8	16.4
Ohio 1403/OH	G	0.17	0.42	0.08	1.0	3.2	722	150	14.2	33.8
Ohio 1499/OH	G		0.33		0.7	2.0	568	175	10.2	32.7
Better Boy/BP	F	0.17	0.58	0.08	2.7	1.7	1042	199	15.6	69.1
Big Early/BP	F				1.8	2.9	927	192		37.8
Big Girl/BP	F	0.25	0.42		0.7	2.7	780	195	16.4	34.3
Early Pick/BP	F		0.08		3.2	2.8	1214	195	1.1	52.5
Lady Luck/BP	F	0.17	0.42		2.1	1.5	935	229	12.4	64.8
Bux IT637/BP	F		0.25	0.08	2.9	4.1	1064	149	4.9	43.9
Dombello/BR	G	0.33	1.00		3.2	1.8	1143	181	21.0	70.9
Dombito/BR	G		0.83		2.4	2.0	920	176	15.7	62.1
Jumbo/BC	G	0.25	0.33		1.8	1.7	843	201	13.5	56.3
Caruso/DR	G		0.33		1.7	2.7	799	177	4.8	41.8
Pink Girl/TW	F	0.17	0.25		2.0	1.5	946	214	10.4	61.2
Fantastic/TW	F		0.17	0.08	3.3	3.0	1167	178	3.6	53.8
Super Beefsteak/TW	F				0.6	3.2	1280	342		15.0
Jet Star/JH	F		0.50		4.4	1.7	1332	199	7.8	73.7
Moreton Hyb./JH	F		0.17	0.17	2.6	5.2	1225	152	4.4	36.4
Star Pak/JH	F		0.08		4.7	2.5	1171	161	1.2	65.7
Beefmaster/JH	F				0.7	3.8	1634	361		15.2
Supersonic/JH	F				3.1	2.2	1088	203		59.1
Early Set/JH	F		1.33	0.58	5.2	1.5	1128	133	21.4	81.1
Ohio MRL3/OH	G			0.08	0.4	3.2	445	127	1.8	10.4
Vendor/ST	G		1.25	0.50	3.2	1.9	886	130	25.5	71.8
Tropic/ST	G	0.08			1.3	1.2	579	239	6.7	52.3
Ont. Pink 774/ST	G		0.08		1.7	4.7	838	131	1.3	25.7
Ont. Hyb. Red/ST	G		0.42		1.7	4.8	853	124	6.0	30.8
Pole King/AC	F		0.42		3.1	1.9	1254	231	6.7	64.8
Tuckcross 520/PT	G				0.3	3.1	751	223		9.7
Tuckcross 533/PT	G				0.9	3.7	850	184		19.7
Vineripe/PT	F	0.08	0.08		1.8	2.2	875	205	3.7	47.5
Wonder Boy/PT	F		0.33		3.7	2.2	1310	214	5.1	65.2
Manalucie/PT	F				1.5	1.0	554	224		60.7
Ponderosa Pink/PT	F				0.8	2.3	765	247		25.9
Beefmaster/PT	F				0.7	2.9	1121	315		18.5
Avalanche/PT	F		0.08	0.08	2.6	2.7	985	178	3.0	49.1
Heavyweight/PT	F		0.08		2.1	1.6	982	271	3.7	65.8
Monte Carlo/PT	F		0.25		4.4	2.5	1152	159	3.8	66.2
Pink Girl/PT	F		0.17		2.5	2.3	1150	230	3.3	53.5
PS M45573/PT	F	0.17	0.67	0.25	2.8	0.8	851	178	23.2	82.0
LSD 5%		0.18	0.54	0.22	1.2	1.5	340	43	9.3	19.9

² No. 1 fruit consists of well formed smooth tomatoes free from defects ("Large" over 255 g (9 oz.); "Medium" from 255g to 99g (3.5 oz.); "Small" under 99g). No. 2 fruit consists of reasonably well formed tomatoes which are free from damage caused by physiological disorders, disease, insects, or other means.

greater than 'Jet Star' (0.00 and 0.50, respectively). During the first 5 weeks, 'Dombello' produced the most No.1 large fruits/plt. and was third behind 'Early Set' (1.33) and 'Vendor' (1.25) in the production of No. 1 medium fruits/plt.. Greenhouse cultivars 'Vendor' and 'Dombito' also had good % marketable yields (71.8% and 62.1%, respectively) but they had lower early yields than 'Dombello' (886g/plt. and 920g/plt., respectively).

Over the entire 11 weeks, 'Jet Star' and 'Dombello' were the best field and greenhouse cultivars in combination of important characteristics (Table 5). Greenhouse cultivars 'Dombello' and 'Jumbo' produced the most No. 1 fruits/plt. (0.33) and 'Dombello' (1.08) was third behind 'Early Set' (1.42) and 'Vendor' (1.25) in the production of No. 1 medium fruits/plt.. 'Early Set', 'Vendor', and 'PS M45573' produced a higher percentage of marketable fruit than most cultivars (44.8%, 39.3%, and 38.2%, respectively). Overall, 'PS M45573' had a fruit yield comparable to 'Jet Star'. 'Pole King', 'Pink Girl' (PT), 'Jumbo', and 'Wonder Boy' also had good total yields (3081g/plt., 3720g/plt., 3203g/plt., and 4017g/plt., respectively), fruit size (208g, 232g, 202g, and 225g, respectively), and % marketable fruit (40.3%, 36.3%, 35.1%, and 32.8%, respectively).

The main cause of fruit reject for all cultivars was cracking (Table 6). About 60% of the fruit classed as rough was still marketable as No. 2 fruit, consequently the %rough fruit score was always higher than %cracks. Both 'Dombello' and 'Jet Star' had a low disorders/fruit ratio compared to other cultivars. 'Jet Star' was the most crack resistant cultivar (49.8%) and 'Jumbo' was second (54.9%). 'Vendor' had the largest percentage of smooth fruit.

TABLE 5. Comparison of field-grown tomato cultivars for graded fruit classes, yield, fruit size, and percent No. 1 and No. 2 fruit for the entire 11 weeks of the trial².

Entry/Source	Type	# of No.1 Lg /Plt	# of No.1 MD /Plt	# of No.1 Sm /Plt	# of No. 2 /Plt	# of Culls /Plt	Fruit Wt/Plt (g)	Fruit Size (g)	% No.1 Fruit	% No. 1 & No. 2 Fruit
Ohio CR6/OH	G		0.25		1.4	13.2	2497	169	1.7	11.4
Ohio 1403/OH	G	0.17	0.42	0.08	3.1	14.5	3012	165	3.7	20.6
Ohio 1499/OH	G		0.42		2.2	12.7	2727	178	2.8	17.1
Better Boy/BP	F	0.17	0.58	0.08	4.4	11.8	3510	205	4.7	31.0
Big Early/BP	F				3.6	14.7	3952	213		18.7
Big Girl/BP	F	0.25	0.50		2.2	13.7	3606	216	4.5	18.1
Early Pick/BP	F		0.08		5.3	12.1	3222	185	0.4	30.5
Lady Luck/BP	F	0.17	0.50		3.9	9.7	3199	227	4.1	31.4
Bux IT637/BP	F		0.25	0.08	4.6	16.3	3532	165	1.6	24.3
Dombello/BR	G	0.33	1.08		5.7	11.9	3414	179	7.6	37.6
Dombito/BR	G		0.92		3.5	11.1	2769	178	6.1	28.9
Jumbo/BC	G	0.33	0.33		4.9	10.3	3203	202	4.2	35.1
Caruso/DR	G		0.42		3.1	13.7	3217	187	2.4	20.3
Pink Girl/TW	F	0.17	0.25		3.8	7.1	2573	224	3.7	37.0
Fantastic/TW	F		0.17	0.08	4.9	13.1	3151	172	1.2	28.1
Super Beefsteak/TW	F				0.8	8.5	3096	331		8.5
Jet Star/JH	F	0.08	0.50		7.6	9.7	3637	203	3.2	45.6
Moreton Hyb./JH	F		0.17	0.17	4.4	15.7	3069	150	1.7	23.2
Star Pak/JH	F		0.17		6.9	10.9	2852	156	1.1	39.3
Beefmaster/JH	F				0.8	9.3	3610	355		8.5
Supersonic/JH	F				5.0	12.1	4227	248		29.0
Early Set/JH	F		1.42	0.58	8.0	12.0	3263	149	8.9	44.8
Ohio MR13/OH	G			0.08	1.2	15.2	2125	129	0.5	8.1
Vendor/ST	G		1.25	0.50	5.2	10.7	2414	137	9.9	39.3
Tropic/ST	G	0.08			3.5	11.2	3769	254	0.6	24.2
Ont. Pink 774/ST	G		0.08		3.2	17.2	2663	130	0.4	16.0
Ont. Hyb. Red/ST	G		0.42		2.4	19.3	2716	121	1.7	12.8
Pole King/AC	F		0.42		5.5	8.8	3081	208	2.6	40.3
Tuckcross 520/PT	G				1.2	16.0	3575	209		7.7
Tuckcross 533/PT	G				2.4	14.7	3241	188		13.6
Vineripe/PT	F	0.08	0.08		3.7	9.8	3114	228	1.1	28.0
Wonder Boy/PT	F		0.33		5.5	12.0	4017	225	1.8	32.8
Manalucie/PT	F				3.3	9.9	2984	226		24.8
Ponderosa Pink/PT	F				1.0	8.7	2631	269		10.4
Beefmaster/PT	F				1.0	9.4	3261	313		9.4
Avalanche/PT	F		0.08	0.08	3.4	10.5	2599	184	1.2	25.2
Heavyweight/PT	F		0.08		3.5	8.9	3859	309	0.6	28.5
Monte Carlo/PT	F		0.25		5.6	12.7	3447	187	1.3	31.1
Pink Girl/PT	F		0.17		5.7	10.2	3720	232	1.0	36.3
PS M45573/PT	F	0.17	1.00	0.25	4.9	9.9	3248	199	8.7	38.2
LSD 5%		0.17	0.57	0.22	1.8	2.7	759	34	3.4	9.6

² No. 1 fruit consists of well formed smooth tomatoes free from defects ("Large" over 255g (9 oz.); "Medium" from 255g to 99g (3.5 oz.); "Small" under 99g). No. 2 fruit consists of reasonably well formed tomatoes which are free from damage caused by physiological disorders, disease, insects, or other means.

TABLE 6. Comparison of field grown tomato cultivars for physiological fruit disorders.

Entry/Source	Type	Dis- order/ fruit	% Puff	% Cracks	% Off Shape	% Rough	% Off Color	% Blossom End Rot	% Zippered	% Mixed
Ohio CR6/OH	G	1.9	4.4	70.5	4.0	88.3		11.4	13.4	75.5
Ohio 1403/OH	G	1.9	1.9	72.2	1.6	89.8		7.5	13.7	74.3
Ohio 1499/OH	G	2.0	2.2	72.8	10.4	93.0	1.2	7.5	17.4	80.9
Better Boy/BP	F	1.7	7.2	65.5	5.2	91.5		0.8	0.6	73.1
Big Early/BP	F	2.0	5.8	78.8	14.9	98.8	0.7	0.5	5.2	84.7
Big Girl/BP	F	1.9	9.4	72.9	4.0	96.9		4.2	4.1	85.0
Early Pick/BP	F	1.9	4.6	75.1	10.6	99.5		0.3	4.2	80.9
Lady Luck/BP	F	1.8	1.7	67.4	8.8	89.3	1.1		6.5	69.8
Bux IT637/BP	F	2.0	3.6	75.2	16.1	98.8		0.2	6.0	81.3
Dombello/BR	G	1.7	1.3	73.9	4.6	93.9		0.6	1.1	75.2
Dombito/BR	G	1.8	8.6	68.2	6.3	91.9			5.5	72.8
Jumbo/BC	G	1.8	9.1	54.9	6.7	97.0		0.7	11.7	67.9
Caruso/DR	G	1.8	2.5	71.9	4.1	95.4			4.1	76.3
Pink Girl/TW	F	1.9	17.6	66.3	4.4	97.0		0.6	6.3	68.9
Fantastic/TW	F	1.9	7.3	61.8	11.9	98.1		0.2	9.8	77.2
Super Beefsteak/TW	F	2.4	9.8	70.2	40.0	100.0			20.9	86.2
Jet Star/JH	F	1.8	18.1	49.8	12.6	97.3		0.7	3.1	67.9
Moreton Hyb./JH	F	1.7	7.0	74.4	4.8	95.1		0.2	4.6	78.8
Star Pak/JH	F	1.8	8.0	60.5	3.4	98.6		2.7	2.5	67.5
Beefmaster/JH	F	2.5	14.7	68.9	40.3	99.3		1.7	27.8	92.3
Supersonic/JH	F	2.2	32.4	77.5	11.5	99.7			2.2	87.6
Early Set/JH	F	1.7	5.8	64.9	7.2	88.8			1.2	65.2
Ohio MR13/OH	G	2.2	0.8	80.5	4.1	92.5		2.5	37.0	89.4
Vendor/ST	G	1.7	0.5	80.9	6.3	85.2			1.5	68.4
Tropic/ST	G	1.8	8.0	57.3	6.8	94.5			15.8	71.8
Ont. Pink 774/ST	G	2.0	0.8	84.5	5.7	99.9			10.1	87.0
Ont. Hyb. Red/ST	G	1.9	1.8	75.9	8.3	98.7		0.8	5.9	81.3
Pole King/AC	F	1.7	5.9	66.8	1.4	94.2		2.2	4.7	71.9
Tuckcross 520/PT	G	2.1	5.6	84.2	6.1	99.8		4.6	6.8	92.2
Tuckcross 533/PT	G	2.1	10.9	85.0	8.1	100.0			5.4	93.4
Vineripe/PT	F	1.9	12.0	71.2	2.9	98.4		1.3	4.3	78.1
Wonder Boy/PT	F	2.0	16.2	73.4	4.6	98.5		3.4	5.0	84.0
Manalucie/PT	F	1.9	5.2	78.4	3.6	100.0		1.1	4.9	82.8
Ponderosa Pink/PT	F	1.8	6.9	58.0	13.3	100.0		1.7	4.4	71.6
Beefmaster/PT	F	2.5	11.0	61.5	43.9	98.6		6.5	31.5	86.4
Avalanche/PT	F	2.0	7.6	70.2	8.0	96.6		11.0	7.2	79.1
Heavyweight/PT	F	2.0	12.0	74.7	7.9	98.5		0.6	10.1	78.6
Monte Carlo/PT	F	2.0	14.9	74.9	5.0	100.0			1.6	80.9
Pink Girl/PT	F	1.9	22.6	57.4	7.4	98.7			6.0	73.8
PS M45573/PT	F	1.7	3.9	60.7	5.9	90.7		2.6	3.1	61.6
LSD 5%		0.2	7.5	16.4	9.8	8.5	NS	5.2	9.4	14.2

Discussion

Valuable characteristics were found in both greenhouse and field types. Some of the greenhouse cultivars like 'Dombello', 'Dombito', and 'Vendor' produced the same percentage of marketable fruit as the best field types. The greenhouse cultivars had lower disorders/fruit ratio's and usually had smoother fruit. The field types tended to have higher yields and larger fruit. Overall, the largest fruiting cultivars usually had the highest yields and the intermediate and smallest fruiting cultivars tended to produce the largest percentage of marketable fruit.

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